CLAIMS:

1. A method for determining susceptibility of a thymus in a patient to activation through disruption of sex steroid signaling to the thymus.

2. The method of claim 1 wherein the method of disrupting the sex steroid signaling to the thymus is through surgical castration to remove the patient's gonads.

3. The method of claim 1 wherein the method of disrupting the sex steroid signaling to the thymus is through administration of one or more pharmaceuticals.

4. The method of claim 3 wherein the pharmaceuticals are selected from the group consisting of LHRH analogs, anti-LHRH receptor antibodies, anti-LHRH vaccines and combinations thereof.

5. The method of claim 4 wherein the LHRH analogs are selected from LHRH agonists and LHRH antagonists.

6. The method of claim 5 wherein the LHRH analogs are selected from the group consisting of Eulexin, Goserelin, Leuprolide, Dioxalan derivatives, Triptorelin, Meterelin, Buserelin, Histrelin, Nafarelin, Lutrelin, Leuprorelin, Deslorelin, Abarelix, Cetrorelix, Zoladex and Leupron.

7. The method of claim 3 wherein the patient's thymus has been at least in part deactivated.

8. The method of claim 3 wherein the patient is post-pubertal.

9. The method of claim 5 wherein the LHRH antagonists are quick-acting LHRH antagonists.

10. The method of claim 9 wherein the LHRH antagonists are selected from the group consisting of Abarelix and Cetrorelix.

11. The method of claim 4 wherein reduction is induced by administration of one or more LHRH agonists and one or more LHRH antagonists.

12. The method of claim 1 comprising the step of monitoring the concentration of one or more thymopoietic cytokines in the patient's blood and/or plasma.

13. The method of claim 12 wherein the cytokine is Interleukin-7.

14. The method of claim 12 comprising the steps of

a. obtaining a blood sample from a patient prior to the disruption;

b. obtaining at least one blood sample from a patient subsequent to the disruption;

c. measuring the amount of thymopoietic cytokine(s) present in each sample; and

d. comparing the amounts of thymopoietic cytokine(s) in the samples to each other,

such that an early increase in thymopoietic cytokine(s) in the patient after disruption indicates activation of the patient's thymus.

15. The method of claim 14 wherein the increase occurs within about one week of disruption.

16. The method of claim 14 wherein the increase occurs within about 4 to 5 days of disruption.

17. The method of claim 14 wherein the increase occurs within about 2 to 3 days of disruption.

18. The method of claim 14 wherein the increase occurs within about 24 hours of disruption.

19. The method of claim 1 comprising the step of monitoring the concentration of one or more thymopoietic hormones in the patient's blood and/or plasma.

20. The method of claim 19 wherein the hormone is selected from the group consisting of thymosin, thymulin and FTS.

21. The method of claim 19 comprising the steps of

a. obtaining a blood sample from a patient prior to the disruption;

b. obtaining at least one blood sample from a patient subsequent to the disruption;

c. measuring the amount of thymopoietic hormone(s) present in each sample; and

d. comparing the amounts of thymopoietic hormone(s) in the samples to each other,

such that an increase in thymopoietic hormone(s) in the patient after disruption indicates activation of the patient's thymus.

22. The method of claim 21 wherein the increase occurs within about one week of disruption.

23. The method of claim 21 wherein the increase occurs within about 4 to 5 days of disruption.

24. The method of claim 21 wherein the increase occurs within about 2 to 3 days of disruption.

25. The method of claim 21 wherein the increase occurs within about 24 hours of disruption.

26. A method of identifying thymic factors comprising the steps of

a) obtaining a blood sample from a patient;

b) disrupting sex steroid mediated signaling to the patient's thymus;

c) obtaining at least one blood sample from the patient after disruption;

d) performing protein analysis on each sample;

e) identifying new proteins that are found in the samples taken after disruption and in lesser concentrations or not at all in samples taken before disruption.

27. The method of claim 26 wherein the blood samples are treated to separate out the plasma and the analyses are performed on the plasma samples.

28. The method of claim 27 wherein the plasma samples are subjected to two dimensional gel electrophoresis.

29. The method of claim 1 comprising the step of monitoring the production of new T cells in the patient's blood.

30. The method of claim 29 wherein the production of new T cells is monitored by detecting the presence in these cells of TRECs.

31. The method of claim 30 comprising the steps of

a) sampling the patient's blood before and after inhibition;

b) sorting the cells in samples to obtain an enhanced population of T cells;

c) isolating the DNA of the cells in the samples; and

d) performing PCR on the isolated DNA using primers specific for TRECs.

32. The method of claim 31 wherein the PCR primers are selected from the group consisting of DNA SEQ ID NO:1, DNA SEQ ID NO:2, DNA SEQ ID NO:3 and DNA SEQ ID NO:4.

33. The method of claim 31 wherein an increase in TRECs after inhibition indicates thymic activation.

34. The method of claim 33 wherein the increase occurs within about one week of disruption.

35. The method of claim 33 wherein the increase occurs within about 4 to 5 days of disruption.

36. The method of claim 33 wherein the increase occurs within about 2 to 3 days of disruption.

37. The method of claim 33 wherein the increase occurs within about 24 hours of disruption.